

IN THE CLAIMS

Please amend claims 13, 18, 23, 42 and 47 as follows:

1 1. (Withdrawn) An apparatus, comprising:

2 a first part including a bore;

3 an eccentric sleeve mounted in said bore of said first part, said eccentric sleeve
4 including an outer surface corresponding to the bore of said first part, and said eccentric
5 sleeve including a bore which is parallel to and not coaxial with the outer surface of the
6 eccentric sleeve; and

7 a second part comprising a pin corresponding to the bore in said eccentric sleeve, said
8 pin being provided for insertion into the bore in said eccentric sleeve.

1 2. (Withdrawn) The apparatus of claim 1, further comprising:

2 securing means passing through said first part for contacting the outer surface of said
3 eccentric sleeve.

1 3. (Withdrawn) The apparatus of claim 2, said securing means comprising a set
2 screw passing through said first part.

1 4. (Withdrawn) The apparatus of claim 2, said securing means comprising:

2 a ball member for contacting the outer surface of said eccentric sleeve; and

3 a set screw passing through said first part, an end of said set screw contacting said ball

4 member.

1 5. (Withdrawn) The apparatus of claim 2, said first part comprising a piston, and
2 said second part further comprising a seal tube, an end of said pin being provided for
3 insertion into said seal tube.

1 6. (Withdrawn) The apparatus of claim 1, said first part comprising a piston, and
2 said second part further comprising a seal tube, an end of said pin being provided for
3 insertion into said seal tube.

1 7. (Withdrawn) An apparatus, comprising:
2 a first part including a bore;
3 a sleeve mounted in said bore of said first part, said sleeve including an outer surface
4 corresponding to the bore of said first part, and said sleeve including a bore; and
5 a second part comprising a pin corresponding to the bore in said sleeve, said pin being
6 provided for insertion into the bore in said sleeve.

1 8. (Withdrawn) The apparatus of claim 7, further comprising:
2 securing means passing through said first part for contacting the outer surface of said
3 sleeve.

1 9. (Withdrawn) The apparatus of claim 8, said securing means comprising a set

2 screw passing through said first part.

1 10. (Withdrawn) The apparatus of claim 8, said securing means comprising:
2 a ball member for contacting the outer surface of said sleeve; and
3 a set screw passing through said first part, an end of said set screw contacting said ball
4 member.

1 11. (Withdrawn) The apparatus of claim 8, said first part comprising a piston, and
2 said second part further comprising a seal tube, an end of said pin being provided for
3 insertion into said seal tube.

1 12. (Withdrawn) The apparatus of claim 7, said first part comprising a piston, and
2 said second part further comprising a seal tube, an end of said pin being provided for
insertion into said seal tube.

1 13. (Currently Amended) An apparatus, comprising:
2 a mount having an aperture;
3 a piston adjacent to said mount and having an aperture, said piston being of a shape
4 for defining a movement direction of the piston;
5 a shear pin having one end press fit into the aperture in said mount and another end
6 inserted through a sleeve into the aperture in said piston, said shear pin restraining the piston
7 relative to the mount;

8 a hammer region formed on said piston and located in the movement direction of said
9 piston;

10 a strikable part mounted in the movement direction of the piston from said hammer
11 region and separated from the hammer region by a gap, said strikable part sealing a flowpath
12 of gas in said apparatus, said hammer region striking said strikable part upon movement of
13 the piston in the movement direction through said gap; and

14 a stationary part connected to said strikable part by a shearable link, said strikable part
15 being separated from said stationary part upon being struck by said hammer region with an
16 input force for shearing said shearable link;

17 said shear pin being constructed to be shearable with less input force than the input
18 force for shearing said shearable link so that the gas does not flow in the apparatus when said
19 shear pin is initially sheared, but gas does flow when both said shear pin and said shearable
20 link are sheared and said strikable part is separated from said stationary part;

21 said sleeve comprising an outer surface and an eccentric bore surrounded by said outer
22 surface for receiving said shear pin, said eccentric bore being parallel to and not coaxial with
23 the outer surface of said sleeve.

1 14. (Previously Presented) The apparatus of claim 13, said strikable part being
2 mounted to said mount.

Claim 15. (Canceled)

1 16. (Previously Presented) The apparatus of claim 13, said stationary part being
2 connected to said mount.

Claim 17. (Canceled)

1 18. (Currently Amended) An apparatus, comprising:
2 a mount having an aperture;
3 a piston adjacent to said mount and having an aperture, said piston being of a shape
4 for defining a movement direction of the piston;
5 a shear pin having one end inserted into the aperture in said mount and another end
6 inserted through a sleeve into the aperture in said piston, said shear pin restraining the piston
7 relative to the mount;
8 a hammer region formed on said piston and located in the movement direction of said
9 piston;
10 a strikable part mounted in the movement direction of the piston from said hammer
11 region and separated from the hammer region by a gap, said strikable part sealing a flowpath
12 of gas in said apparatus, said hammer region striking said strikable part upon movement of
13 the piston in the movement direction through said gap, and said shear pin being spaced apart
14 from said strikable part in the movement direction of said piston; and
15 a stationary part connected to said strikable part by a shearable link, said strikable part
16 being separated from said stationary part upon being struck by said hammer region with an
17 input force for shearing said shearable link;

18 said shear pin being constructed to be shearable with less input force than the input
19 force for shearing said shearable link so that the gas does not flow in the apparatus when said
20 shear pin is initially sheared, but gas does flow when both said shear pin and said shearable
21 link are sheared and said strikable part is separated from said stationary part;

22 said sleeve comprising an outer surface and an eccentric bore surrounded by said outer
23 surface for receiving said shear pin, said eccentric bore being parallel to and not coaxial with
24 the outer surface of said sleeve.

1 19. (Previously Presented) The apparatus of claim 18, said strikable part being
2 mounted to said mount.

Claim 20. (Canceled)

1 21. (Previously Presented) The apparatus of claim 18, said stationary part being
2 connected to said mount.

Claim 22. (Canceled)

1 23. (Currently Amended) An apparatus, comprising:
2 a mount having an aperture;
3 a piston adjacent to said mount and having an aperture, said piston being of a shape
4 for defining a movement direction of the piston;

5 a shear pin having one end of the shear pin inserted into the aperture in said mount and
6 another end of the shear pin connected to said piston through a sleeve, said shear pin
7 restraining the piston relative to the mount;

8 a hammer region formed on said piston and located in the movement direction of said
9 piston; and

10 a strikable part mounted in the movement direction of the piston from said hammer
11 region and separated from the hammer region by a gap, said hammer region striking said
12 strikable part upon movement of the piston in the movement direction through said gap;

13 said sleeve comprising an outer surface and an eccentric bore surrounded by said outer
14 surface for receiving said shear pin, said eccentric bore being parallel to and not coaxial with
15 the outer surface of said sleeve.

1 24. (Previously Presented) The apparatus of claim 23, said strikable part being
2 mounted to said mount.

1 25. (Previously Presented) The apparatus of claim 23, further comprising:
2 a stationary part connected to said strikable part by a shearable link, said strikable part
3 being separated from said stationary part upon being struck by said hammer region with an
4 input force for shearing said shearable link.

1 26. (Previously Presented) The apparatus of claim 25, said stationary part being
2 connected to said mount.

1 27. (Previously Presented) The apparatus of claim 25, said strikable part sealing a
2 flowpath of gas in said apparatus, said shear pin being constructed to be shearable with less
3 input force than the input force for shearing said shearable link so that the gas does not flow
4 in the apparatus when said shear pin is initially sheared, but gas does flow when both said
5 shear pin and said shearable link are sheared and said strikable part is separated from said
6 stationary part.

Claims 28-29. (Canceled)

1 30. (Withdrawn) A pyrovalve, comprising:
2 a housing including a bore;
3 a pyrotechnic initiator mounted in an upper portion of said housing;
4 a seal tube mounted in, and extending out of, said housing, said seal tube having an
5 axis positioned perpendicular to an axis of the bore of said housing, said seal tube further
6 comprising a shearable cap disposed on an end of said seal tube and located inside the
7 housing; and
8 a piston located inside the bore of said housing so as to define a direction of motion
9 of the piston;
10 said piston comprising:
11 a hollow formed in a side of the piston, said hollow receiving said
12 shearable cap, said hollow being larger in cross-section than the shearable cap so as to define

13 a gap between an overhang of the piston and said shearable cap; and
14 a shear pin connecting said shearable cap to said piston through a sleeve
15 for restraining play in said piston.

1 31. (Withdrawn) The pyrovalve of claim 30, wherein said shear pin has a first portion
2 for insertion into an aperture in said shearable cap;

3 said piston including a bore surrounding said sleeve, said shear pin having a second
4 portion not located in said aperture of the shearable cap;

5 said pyrovalve further comprising a sleeve for insertion into the bore of said piston,
6 said sleeve including an outer surface corresponding to said bore of said piston, said sleeve
7 including a bore corresponding to the second portion of the shear pin, said sleeve being
8 oriented parallel to and not coaxial with the outer surface of the sleeve;

9 said second portion of said shear pin being provided for insertion into said bore of
10 said sleeve.

1 32. (Withdrawn) A pyrovalve, comprising:

2 a housing including a bore;

3 a pyrotechnic initiator mounted in an upper portion of said housing;

4 a seal tube mounted in, and extending out of, said housing, said seal tube having an
5 axis perpendicular to an axis of the bore of said housing, said seal tube further comprising
6 a shearable cap disposed on an end of said seal tube and located inside the housing;

7 a piston located inside the bore of said housing so as to define a direction of motion

8 for the piston;

9 said piston comprising:

10 a hollow formed in a side of the piston, said hollow receiving said
11 shearable cap, said hollow being larger in cross-section than the shearable cap so as to define
12 a gap between an overhang of the piston and said shearable cap; and

13 a shear pin press fit into an aperture of said shearable cap and coupled
14 to said piston for restraining play in said piston.

1 33. (Withdrawn) The pyrovalve of claim 32, wherein said shear pin has a first portion
2 for insertion into an aperture in said shearable cap;

3 said piston including a bore surrounding a second portion of the shear pin not located
4 in said aperture of the shearable cap;

5 said pyrovalve further comprising a sleeve for insertion into the bore of said piston,
6 said sleeve including an outer surface corresponding to said bore of said piston, said sleeve
7 including a bore corresponding to the second portion of the shear pin, said sleeve being
8 oriented parallel to and not coaxial with the outer surface of the sleeve;

9 said second portion of said shear pin being provided for insertion into said bore of
10 said sleeve.

1 34. (Withdrawn) The pyrovalve of claim 32, wherein said shear pin having a first
2 portion for insertion into an aperture of said shearable cap;

3 said piston including a bore surrounding a second portion of the shear pin not located

4 in said aperture of the shearable cap;

5 said pyrovalve further comprising a sleeve for insertion into the bore of said piston,
6 said sleeve including a bore corresponding to the second portion of the shear pin;

7 said second portion of said shear pin being provided for insertion into said bore of
8 said sleeve.

1 35. (Withdrawn) A method for restraining free play in an apparatus, comprising the
2 steps of:

3 providing a first part including a bore;

4 mounting a sleeve in said bore of said first part, said sleeve including an outer surface
5 corresponding to said bore of said first part, said sleeve including a bore surrounded by said
6 outer surface; and

7 inserting a pin into the bore in said sleeve.

1 36. (Withdrawn) The method of claim 35, further comprising the steps of:

2 passing a securing device through said first part; and

3 contacting an outer surface of said sleeve with said securing device so as to restrain
4 free play in said first part.

1 37. (Withdrawn) The method of claim 36, further comprising the steps of:

2 providing a second part; and

3 inserting an end of said pin into said second part so as to restrain free play in said first

4 part.

1 38. (Withdrawn) The method of claim 35, further comprising the steps of:
2 providing a second part; and
3 inserting an end of said pin into said second part so as to restrain free play in said first
4 part.

1 39. (Withdrawn) The method of claim 38, further comprising the step of:
2 providing the second part with a bore;
3 press fitting an end of said pin into the bore of said second part; and
4 coupling said second part to said first part by means of said pin.

1 40. (Withdrawn) The method of claim 35, said bore of said sleeve being parallel to
2 and not coaxial with the outer surface of said sleeve.

1 41. (Withdrawn) A method for restraining free play, comprising the steps of:
2 providing a first part including a bore;
3 providing a second part including a bore;
4 press fitting a pin into said bore of said second part; and
5 coupling said first part to said second part by means of said pin.

1 42. (Currently Amended) A method for restraining free play in an apparatus,

2 comprising the steps of:

3 providing a mount having an aperture;

4 providing a piston adjacent to the mount, said piston being of a shape for defining a
5 movement direction of the piston; [[and]]

6 inserting an end of a shear pin into the aperture of the mount and connecting another
7 end of the shear pin to the piston through a sleeve so as to couple said mount to said piston,
8 thereby restraining the piston relative to the mount; and

9 providing said sleeve with an outer surface and an eccentric bore surrounded by said
10 outer surface for receiving said shear pin, said eccentric bore being parallel to and not
11 coaxial with the outer surface of said sleeve.

1 43. (Previously Presented) The method of claim 42, further comprising the step of:

2 with said piston being restrained relative to the mount, striking a strikable part with
3 a hammer region formed on the piston in the movement direction of the piston by traversing
4 the piston through a gap separating the hammer region from the strikable part.

1 44. (Previously Presented) The method of 43, further comprising the step of:

2 separating the strikable part from a stationary part when the strikable part is struck
3 by the hammer region of the piston.

1 45. (Original) The method of claim 44, further comprising the step of:

2 shearing the shear pin by motion of the piston.

1 46. (Original) The method of claim 42, further comprising the step of:

2 shearing the shear pin by motion of the piston.

1 47. (Currently Amended) A method for the restraining free play in an apparatus,
2 comprising the steps of:

3 providing a mount;

4 providing a piston adjacent to the mount, the piston being of a shape for defining a
5 movement direction of the piston;

6 press fitting an end of a shear pin into the mount and coupling another end of the shear
7 pin through a sleeve to said piston for restraining the piston relative to the mount;

8 shearing the shear pin by motion of the piston;

9 striking a strikable part mounted in the movement direction of the piston by a hammer
10 region formed on the piston by moving the piston through a gap separating the hammer
11 region and the strikable part; and

12 separating the strikable part from a stationary part when the strikable part is struck
13 by the hammer region;

14 wherein the strikable part seals a flowpath of gas with apparatus until separated from
15 the stationary part; [[and]]

16 wherein the shear pin is sheared by less force than is required to separate the strikable
17 part from the stationary part so that the gas does not flow through the flowpath when the
18 shear pin is initially sheared, but only flows through the flowpath when the strikable part is

19 separated from the stationary part a certain amount of time after shearing of the shear pin;
20 and
21 wherein said sleeve is provided with an outer surface and an eccentric bore
22 surrounded by said outer surface for receiving said shear pin, said eccentric bore being
23 parallel to and not coaxial with the outer surface of said sleeve.

Claims 48-50. (Canceled)